

AMENDMENT TO THE CLAIMS

1. (Currently Amended) A system for transmitting and receiving data packets formatted in IEEE 1394 standard, comprising:

- a controller interfaced to an internal bus;
- a first interface connected to the bus;
- a first device using a broadcast channel and connected to the first interface;
- a second interface connected to the bus; and
- a second device using the broadcast channel and connected to the second

interface,

wherein the controller is configured for 1) receiving data transmitted from one of the first and second devices via the bus, attaching an identification (ID) header to the received data, the ID header including identification information corresponding to a recipient device determined based at least in part on ~~a transmitting device~~ which of the first and second devices transmitted the data, and retransmitting the received data with the ID header onto the bus; and 2) receiving data with the ID header attached thereto, interpreting the ID header to identify which of the first or second interfaces should receive the data, and transmitting the data over the bus to the identified interface,

wherein the ID header is other than a 1394 header formatted in IEEE 1394 standard and contains information about the data, and

wherein the 1394 header is built based on information contained in the ID header.

2. (Previously Presented) A system according to Claim 1, wherein the first device is a first digital video camera having a fixed broadcast channel and which transmits/receives digital video data isochronously through the first interface and the second device is a second digital video camera having the same fixed broadcast channel as the first digital video camera and which transmits/receives digital video data isochronously through the second interface.

3. (Previously Presented) A system according to Claim 1, wherein the ID header identifies the type of data, the data recipient and amount of data.

4. (Previously Presented) A system according to Claim 2, wherein the digital video data output from either the first or second video camera includes 1394 header information, data, and header check and data check information, and wherein a link layer for each respective interface removes the 1394 header and header check and data check information prior to transmitting the data over the bus to the controller.

5. (Previously Presented) A system according to Claim 2, further comprising a network controller for accessing a local area network and for transmitting data with the ID header, wherein the network controller receives the data and the ID header, attaches a network header to the data and repackages the data with the ID header and network header into a network data packet and, upon receiving access to the local area network, transmits the network packet over the local area network to a receiving side network controller based on the attached network header.

6. (Previously Presented) A system according to Claim 5, wherein received network data packets are unpackaged, network headers are removed, and the ID header is interpreted to identify which interface should receive the data.

7. (Previously Presented) A system according to Claim 6, wherein a link layer of the identified interface attaches 1394 header and data information to the data and transmits the data through a physical layer to the identified interface in an isochronous manner and where, in the case the identified interface connects to the first digital video camera, the identified interface outputs the data in the isochronous manner to the first digital video camera and, in the case the identified interface connects to the second digital video camera, the identified interface outputs the data in the isochronous manner to the second digital video camera.

8. (Original) A system according to Claim 7, further comprising a monitor for displaying analog video data output from either the first or second digital video camera.

9. (Previously Presented) A system according to Claim 1, further comprising a network interface to a local area network.

10. (Original) A system according to Claim 1, wherein the bus is a PCI bus.

11. (Previously Presented) A system for transmitting and receiving data packets formatted in IEEE 1394 standard, comprising:

- a controller interfaced to an internal bus;
- a first interface connected to the bus;
- a first device using a broadcast channel and connected to the first interface;
- a second interface connected to the bus; and
- a second device using the broadcast channel and connected to the second interface,

wherein the controller is configured for receiving data transmitted over the bus and routing the data to either the first or second interface based on the received data using an identification (ID) header other than a 1394 header, the ID header containing information about the data, and identification information corresponding to one of the first and second devices determined based at least in part on a transmitting device, and

wherein the 1394 header is built based on information contained in the ID header.

12. (Previously Presented) A system according to Claim 11, wherein the first device is a first digital video camera having a fixed broadcast channel and which transmits/receives digital video data isochronously through the first interface and the second device is a second digital video camera having the same fixed broadcast channel as the first digital video camera and which transmits/receives digital video data isochronously through the second interface.

13. (Previously Presented) A system according to Claim 12, wherein the digital video data output from either the first or second video camera includes 1394 header information, data, and header and data check information, and wherein a link layer for each respective interface removes the 1394 header and header data check information prior to transmitting the data over the bus to the controller.

14. (Previously Presented) A system according to Claim 12, further comprising a network controller for accessing a local area network and for transmitting data with the ID header, wherein the network controller receives the data and the ID header, attaches a network header to the data and repackages the data with the ID header and network header into a network data packet and, upon receiving access to the local area network, transmits the network packet over the local area network to a receiving side network controller based on the attached network header, wherein the ID header is other than a 1394 header formatted in IEEE 1394 standard.

15. (Previously Presented) A system according to Claim 14, wherein received network data packets are unpackaged, network headers are removed, and the ID header is interpreted to identify which interface should receive the data.

16. (Previously Presented) A system according to Claim 15, wherein a link layer of the identified interface attaches a 1394 header and data information to the data and transmits the data through a physical layer to the identified interface in an isochronous manner and where, in the case the identified interface connects to the first digital video

camera, the identified interface outputs the data isochronously to the first digital video camera and, in the case the identified interface connects to the second digital video camera, the identified interface outputs the data isochronously to the second digital video camera.

17. (Original) A system according to Claim 16, further comprising a monitor for displaying digital video data output from either the first or second digital video camera.

18. (Previously Presented) A system according to Claim 11, further comprising a network interface to a local area network.

19. (Original) A system according to Claim 11, wherein the bus is a PCI bus.

20 to 23. (Cancelled)

24. (Currently Amended) A system for transmitting and receiving data packets formatted in IEEE 1394 standard, comprising:

a controller interfaced to an internal bus;

a first interface connected to the bus;

a first device using a broadcast channel and connected to the first interface

a second interface connected to the bus; and

a second device using the broadcast channel and connected to the second interface;

wherein the controller is configured for 1) receiving data transmitted from one of the first and second devices via the bus, attaching an identification (ID) header and a subheader to the received data, the ID header including identification information corresponding to a recipient device determined based at least in part on ~~a transmitting device~~ which of the first and second devices transmitted the data, and retransmitting the received data with the ID header and subheader onto the bus; and 2) receiving data with ID header and subheader attached thereto, interpreting the ID header and subheader to identify which of the first or second interfaces should receive the data and which broadcast channel in the identified interface should receive the data, and transmitting the data over the bus to the identified interface,

wherein the ID header is other than a 1394 header formatted in IEEE 1394 standard and contains information about the data, and

wherein the 1394 header is built based on information contained in the ID header.

25. (Previously Presented) A system according to Claim 24, wherein the first device is a first digital video camera having a fixed broadcast channel and which transmits/receives digital video data isochronously through the first interface and the second device is a second digital video camera having the same fixed broadcast channel as the first digital video camera and which transmits/receives digital video data isochronously through the second interface.

26. (Previously Presented) A system according to Claim 25, wherein the digital video data output from either the first or second video camera includes 1394 header information, data, and header check and data check information and wherein a link layer for each respective interface removes the 1394 header and header check and data check information prior to transmitting the data over the bus to the controller.

27. (Previously Presented) A system according to Claim 25, further comprising a network controller for accessing a local area network and for transmitting data with the ID header and subheader, wherein the network controller receives the data and the ID header and subheader, attaches a network header to the data and repackages the data with the ID header and subheader and network header into a network data packet and, upon receiving access to the local area network, transmits the network packet over the local area network to a receiving side network controller based on the attached network header.

28. (Previously Presented) A system according to Claim 27, wherein received network data packets are unpackaged, network headers are removed, and the ID header and subheader are interpreted to identify which interface and channel in that interface should receive the data.

29. (Previously Presented) A system according to Claim 28, wherein a link layer of the identified interface attaches a 1394 header and data information to the data and transmits the data through a physical layer to the identified interface in an isochronous manner and where, in the case the identified interface connects to the first digital video

camera, the identified interface outputs the data in the isochronous manner to the first digital video camera and, in the case the identified interface connects to the second digital video camera, the identified interface outputs the data in the isochronous manner to the second digital video camera.

30. (Original) A system according to Claim 29, further comprising a monitor for displaying analog video data output from either the first or second digital video camera.

31. (Previously Presented) A system according to Claim 24, further comprising a network interface to a local area network.

32. (Original) A system according to Claim 24, wherein the bus is a PCI bus.

33. (Previously Presented) A method for use in a system for transmitting and receiving data packets formatted in IEEE 1394 standard, the method comprising steps of:

receiving data from an internal bus, which is connected to a first interface and a second interface, wherein a first device is connected to the first interface and uses a broadcast channel and a second device is connected to the second interface and uses the broadcast channel;

attaching an identification (ID) header to the received data;
retransmitting the received data with the ID header onto the bus;
receiving data with the ID header attached thereto;
interpreting the ID header to identify which of the first or second interfaces should receive the data; and
transmitting the data over the bus to the identified interface,
wherein the ID header is other than a 1394 header formatted in IEEE 1394 standard and contains information about the data and identification information corresponding to a recipient device determined based at least in part on a transmitting device, and
wherein the 1394 header is built based on information contained in the ID header.

34. (Previously Presented) A method for use in a system for transmitting and receiving data packets formatted in IEEE 1394 standard, the method comprising steps of:
receiving data over an internal bus, which is connected to a first interface and a second interface, wherein a first device is connected to the first interface and uses a broadcast channel and a second device is connected to the second interface and uses the broadcast channel; and
routing the data to either the first or second interface based on the received data using an identification (ID) header other than a 1394 header, the ID header containing

information about the data and identification information corresponding to one of the first and second devices determined based at least in part on a transmitting device, and wherein the 1394 header is built based on information contained in the ID header.

35. (Previously Presented) A method for use in a system for transmitting and receiving data packets formatted in IEEE 1394 standard, the method comprising the steps of:

- receiving data from an internal bus, which is connected to a first interface and a second interface, wherein a first device is connected to the first interface and uses a broadcast channel and a second device is connected to the second interface and uses the broadcast channel;
- attaching an identification (ID) header and a subheader to the received data;
- retransmitting the received data with the ID header and subheader onto the bus;
- receiving data with the ID header and subheader attached thereto;
- interpreting the ID header and subheader to identify which of the first or second interfaces should receive the data and which broadcast channel in the identified interface should receive the data; and
- transmitting the data over the bus to the identified interface,

wherein the ID header is other than a 1394 header formatted in IEEE 1394 standard and contains information about the data and identification information

corresponding to a recipient device determined based at least in part on a transmitting device, and

wherein the 1394 header is built based on information contained in the ID header.

36. (Currently Amended) A system for transmitting and receiving data packets formatted in IEEE 1394 standard, comprising:

a controlling means interfaced to a communication means;

a first interface means connected to the communication means;

a first device using a broadcast channel and connected to the first interface means;

a second interface means connected to the communication means; and

a second device using the broadcast channel and connected to the second interface means,

wherein the controlling means is configured for 1) receiving data transmitted from one of the first and second devices via the communication means, attaching an identification (ID) header to the received data, the ID header including identification information corresponding to a recipient device determined based at least in part on a transmitting device which of the first and second devices transmitted the data, and retransmitting the received data with the ID header onto the communication means; and 2) receiving data with the ID header attached thereto, interpreting the ID header to identify which of the first or second interface means should receive the data, and transmitting the data over the communication means to the identified interface means,

wherein the ID header is other than a 1394 header formatted in IEEE 1394 standard and contains information about the data, and

wherein the 1394 header is built based on information contained in the ID header.

37. (Previously Presented) A system for transmitting and receiving data packets formatted in IEEE 1394 standard, comprising:

a controlling means interfaced to a communication means;

a first interface means connected to the communication means;

a first device using a broadcast channel and connected to the first interface means;

a second interface means connected to the communication means; and

a second device using a broadcast channel and connected to the second interface means,

wherein the controlling means is configured for receiving data over the communication means and routing the data to either the first or second interface means based on the received data using an identification (ID) header other than a 1394 header, the ID header containing information about the data and identification information corresponding to one of the first and second devices determined based at least in part on a transmitting device, and

wherein the 1394 header is built based on information contained in the ID header.

38. (Currently Amended) A system for transmitting and receiving data packets formatted in IEEE 1394 standard, comprising:

a controlling means interfaced to a communication means;
a first interface means connected to the communication means;
a first device using a broadcast channel and connected to the first interface means;
a second interface means connected to the communication means; and
a second device using the broadcast channel and connected to the second interface means,

wherein the controlling means is configured for 1) receiving data transmitted from one of the first and second devices via the communication means, attaching an identification (ID) header and a subheader to the received data, the ID header including identification information corresponding to a recipient device determined based at least in part on a transmitting device which of the first and second devices transmitted the data, and retransmitting the received data with the ID header and subheader onto the communication means; and 2) receiving data with the ID header and subheader attached thereto, interpreting the ID header and subheader to identify which of the first or second interface means should receive the data and which broadcast channel in the identified interface means should receive the data, and transmitting the data over the communication means to the identified interface means,

wherein the ID header is other than a 1394 header formatted in IEEE standard and contains information about the data, and

wherein the 1394 header is built based on information contained in the ID header.